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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/998,682	10/31/2001	Adam J. Ferrari	109878-126	7368

23483 7590 01/11/2005

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EXAMINER

TRUONG, CAM Y T

ART UNIT	PAPER NUMBER
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2162

DATE MAILED: 01/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/998,682

Applicant(s)

FERRARI ET AL.

Examiner

Cam Y T Truong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2004.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 and 44-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 and 44-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant has amended claims 1, 11, 14-15, 17-18, 28-30, 32-33, canceled claims 34-43 and added claims 44-46 in the amendment filed on 9/24/2004.

Claims 1-33 and 44-46 are pending in this Office Action.

Applicant's arguments with respect to claims 1-33 and 44-46 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-33 and 44-46 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The added limitation "for each navigation state each of the attribute-value pairs in the particular expression of attribute-value pairs corresponding to that navigation state characterizes in accordance with the expression all of the materials in the particular subset of materials corresponding to that navigation state" in claims 1 and 18 on page 2, lines 11-14, page 4, lines 20-23 is not supported by the specification. Applicant is advised to amend the claims by deleting the added limitations or amend the

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specification to support to the added limitation in the claims. Applicant is also reminded that no new matter should be added.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-5, 10, 11, 13-15, 17-18, 19-22, 27-30, 32, 33 and 44-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cochran (US 6345273) in view of Yahoo! (<http://web.archive.org/web/19991116151216/http://www4.yahoo.com>).

As to claim 1, Cochran teaches the claimed limitations:

“a plurality of attributes characterizing the materials” as a plurality of categories from an electronic data source. Categories are represented as attributes. Electronic data source is represented as materials (col. 3, lines 51-58, fig. 9);

“a plurality of values describing the materials, wherein each of the values has an association with at least one of the attributes and each association defines an attribute-value pair” as each of the search terms 250 is associated with at least one of categories. As shown in fig. 12 is a screenshot after Business & Economy >Business Opportunities is selected at fig. 11. a plurality of sub-categories 258 under Business & Economy >Business Opportunities associate with Business & Economy > Business opportunities to form another set of plurality of pairs such as Business &

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Economy/Business Opportunities >Apparel, Business & Economy/Business

Opportunities> Automotive for refining other pairs;

“a plurality of navigation states” as Logging Locations In the United States/Maryland >Features, Longing Locations in the United States/Maryland >lodging type (figs. 11-13, col. 5, lines 58-67; col. 6, line 9),

“wherein each navigation state corresponds to a particular set of attribute-value pairs and to a particular subset of the materials” each attribute value pair in the set could be used to reduce the number of hits from 402 to some smaller number. As seen each attribute value pair in the set represents or describes 402 lodging locations, and is used to narrow down the hits (col. 6, lines 17-19),

“wherein for each navigation state each of the attribute-value pairs in the particular expression of attribute-value pairs corresponding to that navigation state characterizes in accordance with the expression all of the materials in the particular subset of materials corresponding to that navigation state” as shown in fig. 8 is another navigation state, and the set of attributes-value pairs is used to reduce the number of hits as discussed above. In the non-hierachical search process as discussed performs for each navigation state,

“wherein for at least one navigation state the particular expression of attribute-value pairs corresponding to that navigation state is a conjunction of at least two mutually incomparable attributes pairs” as illustrated in fig. 2, category feature associates with a plurality of values to narrow down the search, and the same with price

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category at fig. 6. Theses attribute/value pairs forming a set corresponding the navigation state of figs. 3 &4 and they are mutually incomparable;

Cochran does not explicitly teach the claimed limitation "a search interface, the search interface including a free-text search tool for accepting free-text queries, the search interface being adapted to generate multi-term free-text queries, wherein a multi-term interpretation maps a free-text query to a navigation state that corresponds to a particular expression of attribute-value pairs that is a conjunction". Yahoo teaches a search interface includes search box as search tool for accepting a user to enter free-text queries. When a user enter free-text queries in this box and check box just this category, the system will map the entered free-text queries to Directory>Arts>Humanities>Literature as corresponding to Humanities>Literature. Humanities/Literature is a particular set of attribute-value pairs for Directory/Arts/Humanities/Literature as navigation states (EXHIBIT I &II). For example, after a user enters America on search box. The system displays a list of search results. The BBC News: Americas is one of search result. This result includes a category: United Kingdom>BBC>regional. The above information shows that system map free text query America to Directory>Society and Culture as state corresponding to Society and Culture as attribute-value pairs (Yahoo, Exhibit XI & XII).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Yahoo's teaching of a web browser as an interface that including a search box to allow a user to enter search query and mapping search query to Directory>Society and Culture corresponding to Society and Culture to Cochran's

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system in order to allow a user to search/retrieve cataloged information elements quickly and eliminate retrieving irrelevant information and to display information to a user.

As to claims 2 and 19, Cochran and Yahoo! teach all the claimed limitation subject matters as discussed in claims 1 and 18, Yahoo! further teaches the claimed limitation "wherein the multi-term interpretations of the free-text query are minimal" as (Yahoo!, Exhibit II).

As to claims 3 and 20, Cochran and Yahoo! teach all the claimed limitation subject matters as discussed in claims 1 and 18, Yahoo! further teaches the claimed limitation "wherein the search interface supports conjunctive query semantics" as Cultures and Groups (Yahoo!, Exhibit II).

As to claims 4 and 21, Cochran and Yahoo! teach all the claimed limitation subject matters as discussed in claims 1 and 18, Yahoo further teaches the claimed limitation "wherein the search interface supports disjunctive query semantics" as authors, Awards or classics (Yahoo!, Exhibit II).

As to claims 5 and 22, Cochran and Yahoo! teach all the claimed limitation subject matters as discussed in claims 1 and 18, Yahoo! further teaches the claimed limitation "wherein the search interface supports customized query semantics" as

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Authors and Award of categories are customized before displaying to a user (Yahoo!, Exhibit II).

As to claims 10 and 27, Cochran teaches the claimed limitation "wherein the search interface supports the specification of delimited phrases" as (fig. 6).

As to claims 11 and 28, Cochran and Yahoo! teach all the claimed limitation subject matters as discussed in claim 1, Yahoo! further teaches the claimed limitation "wherein the search interface supports constraining the set of search results to the subset of materials in the current navigation state where the free-text query is accepted" as (Yahoo!, Exhibit II&VII).

As to claim 13, Cochran teaches the claimed limitation "including a full-text search tool for searching the set of materials" as (col. 14, lines 40-60).

As to claims 14 and 29, Cochran teaches the claimed limitation "wherein the set of search results is organized by attribute" as (fig. 7).

As to claims 15 and 30, Cochran and Yahoo! teach all the claimed limitation subject matters as discussed in claims 1 and 18, Yahoo! further teaches the claimed limitation "wherein the set of search results further includes navigation options to the navigation states corresponding to the multi-term interpretations" as (Yahoo!, Exhibit II

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& VII).

As to claims 17 and 32, Cochran and Yahoo! teach all the claimed limitation subject matters as discussed in claims 1 and 18, Yahoo! further teaches the claimed limitation "further comprising a navigation interface, the navigation interface including a guided navigation tool providing a set of navigation options from the current navigation state to one or more other navigation states, each navigation option providing a direct path to one of the one or more other navigation states" as (Yahoo!, Exhibits I, V&VI).

As to claim 18, Cochran teaches the claimed limitations:

"a plurality of attributes characterizing the materials" as a plurality of categories from an electronic data source. Categories are represented as attributes. Electronic data source is represented as materials (col. 3, lines 51-58, fig. 9);

"a plurality of values describing the materials, wherein each of the values has an association with at least one of the attributes and each association defines an attribute-value pair" as each of the search terms 250 is associated with at least one of categories. As shown in fig. 12 is a screenshot after Business & Economy >Business Opportunities is selected at fig. 11. a plurality of sub-categories 258 under Business & Economy >Business Opportunities associate with Business & Economy > Business opportunities to form another set of plurality of pairs such as Business & Economy/Business Opportunities >Apparel, Business & Economy/Business Opportunities> Automotive for refining other pairs;

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"a plurality of navigation states" as Logging Locations In the United States/Maryland >Features, Longing Locations in the United States/Maryland >lodging type (figs. 11-13, col. 5, lines 58-67; col. 6, line 9),

"wherein each navigation state corresponds to a particular set of attribute-value pairs and to a particular subset of the materials" each attribute value pair in the set could be used to reduce the number of hits from 402 to some smaller number. As seen each attribute value pair in the set represents or describes 402 lodging locations, and is used to narrow down the hits (col. 6, lines 17-19),

"wherein for each navigation state each of the attribute-value pairs in the particular expression of attribute-value pairs corresponding to that navigation state characterizes in accordance with the expression all of the materials in the particular subset of materials corresponding to that navigation state" as shown in fig. 8 is another navigation state, and the set of attributes-value pairs is used to reduce the number of hits as discussed above. In the non-hierarchical search process as discussed performs for each navigation state,

"wherein for at least one navigation state the particular expression of attribute-value pairs corresponding to that navigation state is a conjunction of at least two mutually incomparable attributes pairs" as illustrated in fig. 2, category feature associates with a plurality of values to narrow down the search, and the same with price category at fig. 6. Theses attribute/value pairs forming a set corresponding the navigation state of figs. 3 &4 and they are mutually incomparable.

Cochran does not explicitly teach the claimed limitation “a search interface, the search interface including a free-text search tool for accepting free-text queries, the search interface being adapted to generate single-term and multi-term interpretations of free-text queries, wherein a single-term interpretation maps a free-text query to a navigation state corresponding to a particular expression of attribute-value pairs including only one attribute-value pair, and wherein a multi-term interpretation maps a free-text query to a navigation state corresponding to a particular expression of attribute-value pairs that is a conjunction”. Yahoo teaches a search interface includes search box as search tool for accepting a user to enter free-text queries. When a user enter free-text queries in this box and check box just this category, the system will map the entered free-text queries to Directory>Arts>Humanities>Literature as corresponding to Humanities>Literature. Humanities/Literature is a particular set of attribute-value pairs for Directory/Arts/Humanities/Literature as navigation states (EXHIBIT I & II). For example, after a user enters America on search box. The system displays a list of search results. The BBC News: Americas is one of search result. This result includes a category: United Kingdom>BBC>regional. The above information shows that system map free text query America to Directory>Society and Culture as state corresponding to Society and Culture as attribute-value pairs (Yahoo, Exhibit XI & XII).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Yahoo's teaching of a web browser as an interface that including a search box to allow a user to enter search query and mapping search query to Directory>Society and Culture corresponding to Society and Culture to Cochran's

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system in order to allow a user to search/retrieve cataloged information elements quickly and eliminate retrieving irrelevant information and to display information to a user.

As to claim 33, Cochran teaches the claimed limitations:

“a plurality of attributes characterizing the materials” a plurality of categories from an electronic data source. Categories are represented as attributes. Electronic data source is represented as materials (col. 3, lines 51-58, fig. 9);

“plurality of values describing the materials, wherein each of the values has an association with at least one of the attributes and each association defines an attribute-value pair, and wherein some of the attribute-value pairs refine other of the attribute-value pairs” as each of the search terms 250 is associated with at least one of categories. As shown in fig. 12 is a screenshot after Business & Economy >Business Opportunities is selected at fig. 11. a plurality of sub-categories 258 under Business & Economy >Business Opportunities associate with Business & Economy > Business opportunities to form another set of plurality of pairs such as Business & Economy/Business Opportunities >Apparel, Business & Economy/Business Opportunities> Automotive for refining other pairs;

“a plurality of navigation states” as Logging Locations In the United States/Maryland >Features, Logging Locations in the United States/Maryland >lodging type (figs. 11-13, col. 5, lines 58-67; col. 6, line 9),

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“wherein for each navigation state each of the attribute-value pairs in the particular expression of attribute-value pairs corresponding to that navigation state characterizes in accordance with the expression all of the materials in the particular subset of materials corresponding to that navigation state” as shown in fig. 8 is another navigation state, and the set of attributes-value pairs is used to reduce the number of hits as discussed above. In the non-hierarchical search process as discussed performs for each navigation state,

“wherein for at least one navigation state the particular expression of attribute-value pairs corresponding to that navigation state is a conjunction of at least two mutually incomparable attributes pairs” as illustrated in fig. 2, category feature associates with a plurality of values to narrow down the search, and the same with price category at fig. 6. Theses attribute/value pairs forming a set corresponding the navigation state of figs. 3 &4 and they are mutually incomparable.

Cochran does not explicitly teach the claimed limitation “a navigation interface, the interface providing a plurality of transitions, each transition providing a direct path between two of the navigation states, wherein each transition represents a change from the expression of attribute-value pairs corresponding to an originating navigation state to the expression of attribute-value pairs corresponding to a destination navigation state, wherein a series of one or more transitions provides a path between any two navigation states; a search interface, the interface including a free-text search tool for accepting free-text queries, the interface being adapted to generate multi-term interpretations for free-text queries, wherein a multi-term interpretation maps a free-text

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query to a navigation state corresponding to a particular expression of attribute-value pairs that is a conjunction”.

Yahoo! teaches the claimed limitations:

“a navigation interface, the interface providing a plurality of transitions, each transition providing a direct path between two of the navigation states, wherein each transition represents a change from the expression of attribute-value pairs corresponding to an originating navigation state to the expression of attribute-value pairs corresponding to a destination navigation state, wherein a series of one or more transitions provides a path between any two navigation states” as for traversing, a conventional web browser is used such as Internet Explorer, which provides a path from a category to a subcategory, Home/Art -> Art/Humanities, and a path to sub subcategory Art/Humanities -> Humanities/Literature (Exhibits, I, V & VI);

“ the interface being adapted to generate multi-term interpretations for free-text queries, a multi-term interpretation including a conjunction of attribute-value pairs that corresponds to a navigation state, the interface providing a set of search results including multi-term interpretations for a free-text query” as after a user clicks on any categories the system will displaying a list of search results including single-term interpretations and multi-term interpretations including Cultures and Groups as a conjunction of attribute-value pairs (Exhibit II & VI);

“a search interface, the interface including a free-text search tool for accepting free-text queries, the interface being adapted to generate multi-term interpretations for free-text queries, wherein a multi-term interpretation maps a free-text query to a

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navigation state corresponding to a particular expression of attribute-value pairs that is a conjunction" as a search interface includes search box as search tool for accepting a user to enter free-text queries. When a user enter free-text queries in this box and check box just this category, the system will map the entered free-text queries to Directory>Arts>Humanities>Literature as corresponding to Humanities>Literature. Humanities/Literature is a particular set of attribute-value pairs for Directory/Arts/Humanities/Literature as navigation states (EXHIBIT I & II). For example, after a user enters America on search box. The system displays a list of search results. The BBC News: Americas is one of search result. This result includes a category: United Kingdom>BBC>regional. The above information shows that system map free text query America to Directory>Society and Culture as state corresponding to Society and Culture as attribute-value pairs (Yahoo, Exhibit XI & XII).

in order to allow a user to search/retrieve cataloged information elements quickly and eliminate retrieving irrelevant information and to display information to a user.

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Yahoo's teaching of in Exhibit II, Humanities/Literature, Directory/Arts/Humanities/Literature, using the technique of navigating and including a web browser as an interface to generating a result based on queries for traversing, and providing a path from a category to a subcategory, Home/Art -> Art/Humanities, and a path to sub subcategory Art/Humanities -> Humanities/Literature. After a user clicks on any categories the system will displaying a list of search results including single-term interpretations and multi-term interpretations including Cultures and Groups as a

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conjunction of attribute-value pairs. A web browser includes a search box to allow a user to enter search query and mapping search query to Directory>Society and Culture corresponding to Society and Culture to Cochran's system to Cochran's system in order to allow a user to search/retrieve cataloged information elements quickly, to eliminate retrieving irrelevant information and further to display information to a user.

As to claim 44, Cochran and Yahoo teach all the claimed limitation subject matters as discussed in claim 1, Yahoo further teaches "wherein the search interface provides a display of a set of search results for a query, the set of search results including one or more multi-term interpretations when at least one multi-term interpretation is generated" as (Exhibits I, II, XI, XII).

As to claim 45, Cochran and Yahoo teach all the claimed limitation subject matters as discussed in claim 18, Yahoo further teaches "wherein the search interface provides a display of a set of search results for a query, the set of search results including one or more single-term interpretations when at least one single-term interpretation is generated and the set of search results including one or more multi-term interpretations when at least one multi-term interpretation is generated" as (Exhibits I, II, XI, XII).

As to claim 46, Cochran and Yahoo teach all the claimed limitation subject matters as discussed in claim 18, Yahoo further teaches "wherein the search interface

provides a display of a set of search results for a query, the set of search results including one or more multi-term interpretations when at least one multi-term interpretation is generated" as (Exhibits I, II, XI, XII).

6. Claims 6 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cochran et al (or hereinafter "Cochran") (USP 6356899) in view of Yahoo! (<http://web.archive.org/web/19991116151216/http://www4.yahoo.com>) and further in view of Vora et al (or hereinafter "Vora") (USP 5819273).

As to claims 6 and 23, Cochran and Yahoo! teach all the claimed limitation subject matters as discussed in claims 1 and 18, except the claimed limitation "wherein the search interface ignores stop words in the free-text query". Vora teaches the users search request was the phrase the law in Shakespeare. It will be appreciated that the words the and in are considered stop words and matches to these words which are too prevalent will not be displayed; in effect the system ignores stop words. Thus, the search has two criteria which are treated alternatively such that any document having any one of the two words law, Shakespeare will be a match, and the system will retrieve the document assuming a minimum ranking is satisfied and the maximum number of returns is not exceeded as described above and the date restriction is satisfied (fig. 4B).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Vora's teaching of ignoring stop words to Cochran's system and Yahoo's system in order to save time for searching a record.

7. Claims 7 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cochran et al (or hereinafter "Cochran") (USP 6356899) in view of Yahoo! (<http://web.archive.org/web/19991116151216/http://www4.yahoo.com>) and further in view of Li (USP 6480843).

As to claims 7 and 24, Cochran and Yahoo! teach all the claimed limitation subject matters as discussed in claims 1 and 18, except the claimed limitation "wherein the search interface treats syntactically related words as equivalent". Li teaches intersection of the document lists from the two rows forms the answer to the query. Clearly, this approach to IR supports only exact matches and will fail to retrieve relevant documents containing terms with similar meanings such as automobile dealer car showroom or automobile showroom Query expansion can be used in conjunction with a special utility to expand the query from car and dealer to (car or automobile and dealer or showroom) (fig. 2b).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Li's teaching of intersection of the document lists from the two rows forms the answer to the query. Clearly, this approach to IR supports only exact matches and will fail to retrieve relevant documents containing terms with similar meanings such as automobile dealer car showroom or automobile showroom Query expansion can be used in conjunction with a special utility to expand the query from car and dealer to (car or automobile and dealer or showroom) to Cochran's system and Yahoo!'s system in order to reduce the chances of missing relevant documents.

8. Claims 8 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cochran et al (or hereinafter "Cochran") (USP 6356899) in view of Yahoo! (<http://web.archive.org/web/19991116151216/http://www4.yahoo.com>) and further in view of Sanfilippo (USP 6260008).

As to claims 8 and 25, Cochran and Yahoo! teach all the claimed limitation subject matters as discussed in claims 1 and 18, except the claimed limitation "wherein the search interface treats semantically related words as equivalent". Sanfilippo teaches two words are synonymically related or semantically similar if they have equivalent meaning. This means that if two words have equivalent meaning, they are related to each other. When these two words are related to each other and have same meaning. Definitely, they are treated as equivalent (col. 4, lines 20-35).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Sanfilippo's teaching of two words are synonymically related or semantically similar if they have equivalent meaning to Cochran's system and Yahoo's system in order to specify a query for reducing the chances of missing relevant documents and to support query expansion, indices on words related by lexical semantics and syntactical co-occurrence need to be maintained.

9. Claims 9 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cochran et al (or hereinafter "Cochran") (USP 6356899) in view of Yahoo!

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(<http://web.archive.org/web/19991116151216/http://www4.yahoo.com>) and further in view of Schabes et al (or hereinafter "Schabes").

As to claims 9 and 26, Cochran and Yahoo! teach all the claimed limitation subject matters as discussed in claims 9 and 26, except the claimed limitation "wherein the search interface performs automatic spelling corrections. Schabes teaches automatically correcting misspelled words without significant user intervention (col. 2, lines 5-10).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Schabes's teaching of automatically correcting misspelled words without significant user intervention in order to eliminate user's input and to correct misspelled words quickly.

10. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cochran et al (or hereinafter "Cochran") (USP 6356899) in view of Yahoo! (<http://web.archive.org/web/19991116151216/http://www4.yahoo.com>) and further in view of Feng (USP 6483523).

As to claim 12, Cochran and Yahoo! teach all the claimed limitation subject matters as discussed in claim 1, except the claimed limitation "including a profile for each of the materials in the set of materials, the profile including descriptive information, the free-text search tool enabling searching the descriptive information in the profiles".

Feng teaches searching personal profile via a browser interface (figs. 3&4).

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It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Feng's teaching of searching personal profile via a browser interface to Cochran's system and Yahoo's system in order to retrieve stored personal profiles to all users.

11. Claims 16 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cochran et al (or hereinafter "Cochran") (USP 6356899) in view of Yahoo! (<http://web.archive.org/web/19991116151216/http://www4.yahoo.com>) and further in view of Jacobson et al (or hereinafter "Jacobson") (USP 6167397).

As to claims 16 and 31, Cochran and Yahoo! teach all the claimed limitation subject matters as discussed in claims 16 and 31, except the claimed limitation "further including a first inverted index relating words to attribute-value pairs and a second inverted index relating attribute-value pairs to materials". Jacobson teaches the term-position inverted index is associated with document pairs (col. 4, lines 10-35). The inverted index II is associated with document pairs (col. 3, lines 30-40).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Jacobson's teaching of the term-position inverted index and the inverted index II are associated with document pairs to Cochran's system and Yahoo!'s system in order to find split matches across structured and unstructured document and to rank paired documents in order again relying on the concept of the diversity of matches of documents in the cluster to the query keywords.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure

Zondervan (US 6516327).

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Contact Information

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cam Y T Truong whose telephone number is (571) 272-4042. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Cam-Y Truong
Patent Examiner
Art Unit 2162
12/29/2004

Mohammad Ali
Primary Examiner
AU: 2167